



Physical Research Laboratory, Ahmedabad

Colloquium 17-08

- Speaker:** Dr. Priyanka Chaturvedi
Post-Doctoral Fellow, Astronomy and Astrophysics Division, PRL, Ahmedabad.
- Title:** “High Resolution Spectroscopy studies of Transiting Systems”
- Time:** Wednesday, 15 March 2017, 16.00 hrs.
- Venue:** K. R. Ramanathan Auditorium, PRL

Abstract

A vast majority of observations of M dwarfs, of varying masses, have reported a higher radius by 10-20% than those predicted by the theoretical models. The mismatch of the radii as seen in these stars is termed as the 'M dwarf radius problem'. Studying M dwarfs in Eclipsing Binaries (EBs) with an aim to alleviate the M dwarf radius problem has been the motivation for the current research work. Mass measurements have been performed by Radial velocity observations using the high-resolution spectrograph, PARAS coupled with the 1.2 m telescope at Gurushikhar Observatory, Mount Abu, India. A software code, PARAS SPEC has been also developed to determine the stellar properties of the host star. I shall be briefly talking about this tool as well.

The Speaker

Priyanka Chaturvedi completed her BSc from Fergusson College and MSc from Physics Department, University of Pune. She has been a topper in the Physics Department for both her BSc and MSc. She has completed her PhD from PRL in August 2016 and continues to work as a postdoctoral fellow at PRL until this month, before she leaves for her next postdoctoral position at TIFR, Mumbai. Her PhD thesis comprises of the first science results published with PARAS, the extremely precise high-resolution spectrograph in India. She has also contributed in the development of few software packages for the PARAS program, one of them being the tool to determine stellar properties of the host star. Her thesis has recently been awarded with the 'K.D. Abhyankar Best thesis presentation award' at the ASI-2017 held in Jaipur.

Tea at 15:30 hrs.

ALL ARE WELCOME

